

CALIBRATION STANDARD SPECIFICATION
FOR AN
ONE-WIDE POWER MODULE MAINFRAME
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PROCUREMENT PACKAGE

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CALIBRATION STANDARD SPECIFICATION FOR AN
ONE-WIDE POWER MODULE MAINFRAME

1. SCOPE

1.1 Scope. This specification defines the mechanical, electrical, and electronic characteristics for a Power Module Mainframe. This equipment is intended to be used by Navy personnel in shipboard and shorebased laboratories to house and power one Tektronix TM500 series or equivalent electronic module. For the purposes of this specification, the One-Wide Power Module Mainframe shall be referred to as the OPMM.

2. APPLICABLE DOCUMENTS

2.1 Controlling Specifications. MIL-T-28800, "Military Specification, Test Equipment for use with Electrical and Electronic Equipment, General specification for," and all documents referenced therein of the issues in effect on the date of this solicitation shall form a part of this specification.

3. REQUIREMENTS

3.1 General. The OPMM shall conform to the Type II, Class 5, Style E requirements as specified in MIL-T-28800 for Navy shipboard and shorebased use as modified below. The use of material restricted for Navy use shall be governed by MIL-T-28800.

3.1.1 Design and Construction. The OPMM design and construction shall meet the requirements of MIL-T-28800 for Type II equipment.

3.1.2 Power Requirements. The OPMM shall operate from a source of 103.5V to 129V at 60 Hz +/-5% single phase input power.

3.1.2.1 Fuses and Circuit Breakers. Fuses or circuit breakers shall be provided. If circuit breakers are used, both sides of the power source shall be automatically disconnected from the equipment in the event of excessive current. If fuses are used, only the line side of the input power line as defined by MIL-C-28777 shall be fused. Fuses and circuit breakers shall be readily accessible.

3.1.2.2 Power connections. The requirements for power source connections shall be in accordance with MIL-T-28800 with a 6 foot minimum length cord.

3.1.3 Dimensions and Weight. Maximum dimensions shall not exceed 5 inches in width, 8 inches in height, and 18 inches in depth. The weight shall not exceed 15 pounds.

3.1.4 Lithium Batteries. Per MIL-T-28800, lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be

submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.

3.2 Environmental Requirements. The OPMM shall meet the environmental requirements for a Type II, Class 5, Style E equipment with the deviations specified below.

3.2.1 Temperature and Humidity. The OPMM shall meet the conditions below:

	<u>Temperature (°C)</u>	<u>Relative Humidity (%)</u>
Operating	10 to 30	95
	30 to 40	75
Non-operating	-40 to 70	Not Controlled

3.2.2 Electromagnetic Compatibility. The electromagnetic compatibility requirements of MIL-T-28800 are limited to the following areas: CE01, CE03, CS01, CS02 (0.05 to 100 MHz), CS06, RE01 (back panel search excluded), RE02 (14 kHz to 1 GHz), and RS03.

3.3 Reliability. Type II reliability requirements are as specified in MIL-T-28800.

3.3.1 Calibration Interval. The OPMM shall have an 85% or greater probability of remaining within tolerances of all specifications at the end of a 12 month period.

3.4 Maintainability. The OPMM shall meet the Type II maintainability requirements as specified in MIL-T-28800 except the lowest discrete component shall be defined as a replaceable assembly. Certification time shall not exceed 60 minutes.

3.5 Performance Requirements. The OPMM shall provide the following capability as specified below. Unless otherwise indicated, all specifications shall be met following a 30-minute warm-up period.

3.5.1 Thermal Cutoff. The OPMM shall have a thermal cutoff device to disconnect power when the safe operating temperature range is exceeded.

3.5.2 Power Module Compatibility. The OPMM shall have the physical and electrical compatibility of enclosing and supplying power to any one of the Tektronix TM500 series or equivalent plug-ins and without adapters.

3.5.3 Line Voltage Ranges. The OPMM shall have the following line voltages selectable via an internal jumper or rear panel: 100, 110, 120, 200, 220, and 240 VAC.

3.5.4 Line Frequency Range. The OPMM shall have a minimum line frequency range of 48 to 440 Hz.

3.6 Operating Requirements. The OPMM shall provide the following capabilities.

3.6.1 Front Panel Display. A front panel display is not required for the OPMM.

3.7 Manual. At least two copies of an operation and maintenance manual shall be provided. The manual shall meet the requirements of MIL-M-7298.